

## CLAIMS

1. A resin composition comprising a polymer and at least 5 % by weight of an ester compound, wherein the ester compound and the polymer are obtained by reacting a diene, a dienophile and a carboxylic acid.
- 5 2. A resin composition according to claim 1 comprising at least 10 % by weight of the ester compound.
3. A resin composition according to claim 1, wherein the polymer has no acid functionalities.
- 10 4. A resin composition according to claim 1, wherein the ester compound and the polymer are obtained by reacting a diene, a dienophile and a carboxylic acid present in a reaction mixture, wherein the reaction mixture comprises up to about 75 % by weight of the diene, up to about 55 % by weight of the dienophile, and from about 10 to about 75 % by weight of the carboxylic acid.
- 15 5. A resin composition according to claim 4, wherein the reaction mixture comprises from about 15 to about 60 % by weight of the diene, from about 10 to about 45 % by weight of the dienophile, and from about 15 to about 60 % by weight of the carboxylic acid.
- 20 6. A resin composition according to claim 1, wherein the resin composition has an acid number below about 50.
7. A resin composition according to claim 1, wherein the resin composition has an acid number below about 20.
- 25 8. A resin composition according to claim 1, wherein the carboxylic acid is an organic carboxylic acid.
9. A resin composition according to claim 8, wherein the organic carboxylic acid is a rosin acid, a derivative of a rosin acid, or a mixture thereof.
10. A resin composition according to claim 1, wherein the diene is a hydrocarbon diene.
- 30 11. A resin composition according to claim 10, wherein the diene is a cyclic hydrocarbon diene.
12. A resin composition according to claim 11, wherein the diene is a polycyclic hydrocarbon diene.

13. A resin composition according to claim 12, wherein the diene is dicyclopentadiene.

14. A resin composition according to claim 1, wherein the dienophile is selected from the group consisting of terpenes, cyclic hydrocarbons, anhydrides, acid olefins, olefinic 5 ketones and mixtures thereof.

15. A resin composition according to claim 1, wherein the dienophile is an aromatic vinylic hydrocarbon, an acrylic hydrocarbon or a mixture thereof.

16. A resin composition according to claim 15, wherein the dienophile is styrene.

17. A resin composition comprising a polymer and at least 5 % by weight of an 10 ester compound, wherein the ester compound and the polymer are obtained by reacting a polycyclic hydrocarbon diene, a dienophile and a rosin acid, a derivative of a rosin acid or a mixture thereof, wherein the resin composition has an acid number below about 50.

18. A resin composition according to claim 17, wherein the dienophile is selected from the group consisting of terpenes, cyclic hydrocarbons, anhydrides, acid olefins, olefinic 15 ketones and mixtures thereof.

19. A resin composition according to claim 17, wherein the dienophile is an aromatic vinylic hydrocarbon or acrylic hydrocarbon or a mixture thereof.

20. A resin composition according to claim 17, wherein the ester compound and the polymer are obtained by reacting a diene, a dienophile and either a rosin acid, a 20 derivative of a rosin acid, or a mixture thereof, present in a reaction mixture, wherein the reaction mixture comprises up to about 75 % by weight of the diene, up to about 55 % by weight of the dienophile, and from about 10 up to about 75 % by weight of the rosin acid, the derivative of a rosin acid, or the mixture thereof.

21. A resin composition comprising at least 5 % by weight of an ester compound, 25 and a polymer, wherein the ester compound and the polymer are obtained by reacting a polycyclic hydrocarbon diene, styrene and a rosin acid, a derivative of a rosin acid, or a mixture thereof.

22. An adhesive composition comprising a resin composition, wherein the resin composition comprises at least 5 % by weight of an ester compound, the resin composition 30 also comprises a polymer, wherein the ester compound and the polymer are obtained by reacting a diene, a dienophile and a carboxylic acid.

23. An adhesive composition according to claim 22, which is an aqueous pressure sensitive adhesive composition.

24. An adhesive composition according to claim 22, which is a hot melt pressure sensitive adhesive composition.
25. An adhesive composition according to claim 22, which is a flooring pressure sensitive adhesive composition.
- 5 26. A method for producing a resin composition which comprises providing a reaction mixture comprising up to about 75 % by weight of a diene, up to about 55 % by weight of a dienophile, and from about 10 to about 75 % by weight of a carboxylic acid, heating the reaction mixture at a temperature from about 175 °C up to about 310 °C for about 1 up to about 2 hours.
- 10 27. A method for producing a resin composition according to claim 26, wherein the reaction mixture comprises from about 15 to about 60 % by weight of a diene, from about 10 to about 45 % by weight of a dienophile, and from about 15 to about 60 % by weight of a carboxylic acid.